PROC. ENTOMOL. SOC. WASH.
96(1), 1994, pp. 44–53

KEY TO THE SUBFAMILIES AND TRIBES OF THE NEW WORLD COREIDAE (HEMIPTERA), WITH A CHECKLIST OF PUBLISHED KEYS TO GENERA AND SPECIES

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Abstract.—Keys are presented to the three subfamilies and 15 tribes of Coreidae which occur in the New World. A list of published keys to New World genera and species is also presented.

Key Words: Hemiptera, Heteroptera, Coreidae, New World, tribal keys, subfamily keys

Scientific work must be accessible. In taxonomy, this places upon specialists the responsibility to provide keys and catalogs, in addition to descriptive and phylogenetic research. The publishing of keys and catalogs opens the literature to others, and often stimulates further work. Studies on the New World Coreidae have languished for half a century. Neglect of these often large and abundant and occasionally economically important bugs has been due, I believe, to the lack of means to identify them. Most literature treating the New World Coreidae has been restricted to the North American fauna, except for the recent efforts of Brailovsky (1983 to present). Torre-Bueno (1941) provided synoptic keys to species of North America and Blatchley (1926) covered the family for eastern North America. More recently, Froeschner's (1988) catalog to the North American Coreidae and Baranowski and Slater's Coreidae of Florida (1986) have contributed greatly to our understanding of this family. However, except for the outdated and untranslated key of Stål (1867), no key exists to the subfamilies and tribes of the New World Coreidae.

The present classification of New World Coreidae is based primarily on Stål's (1867, 1870) work which is the only comprehensive treatment for the identification of subfamilies, tribes, and genera. But in the century since, there have been many changes in the higher classification, including descriptions of new tribes (Blatchley 1926, O'Shea and Schaefer 1978, Brailovsky 1988a), and the placement of three New World genera in the tribe Hydarini, until recently thought to occur only in the Old World (Brailovsky 1988b). The New World component of this family presently contains about 136 genera and 838 species (Packauskas, unpublished).

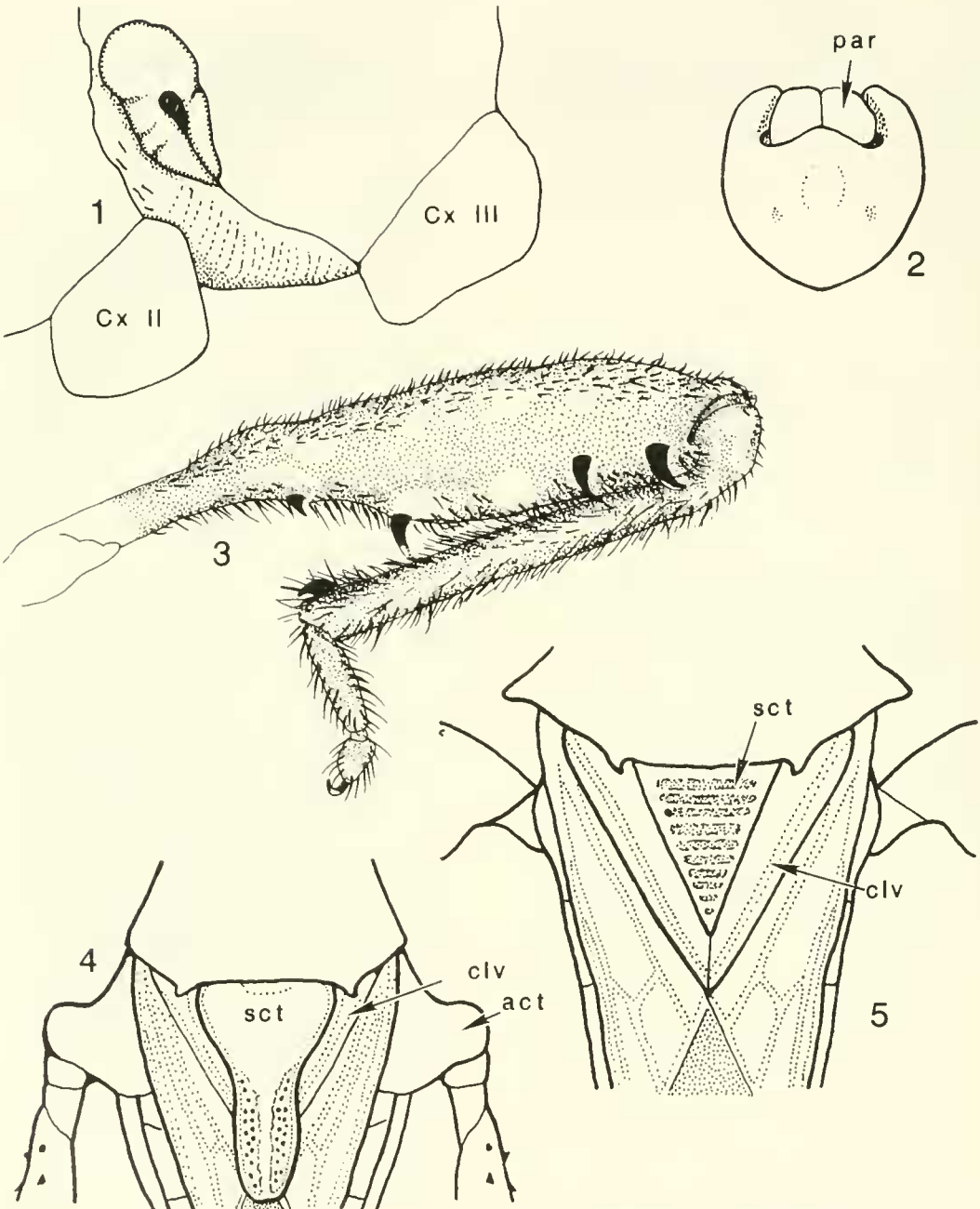
This paper provides an updated summary of the classification and a key to the subfamilies and tribes of the New World Coreidae with references to published keys to genera and species. All groups keyed here are exclusively New World except for the Anisoscelini (mostly New World with the exception of one species) and the Pseudophloeinae, Coreini, and Hydarini. It is my hope that this information will stimulate further research on the family, and aid collectors and curators in sorting unidentified material to make it more readily available for study.

It is important to note that "Anisosceli-

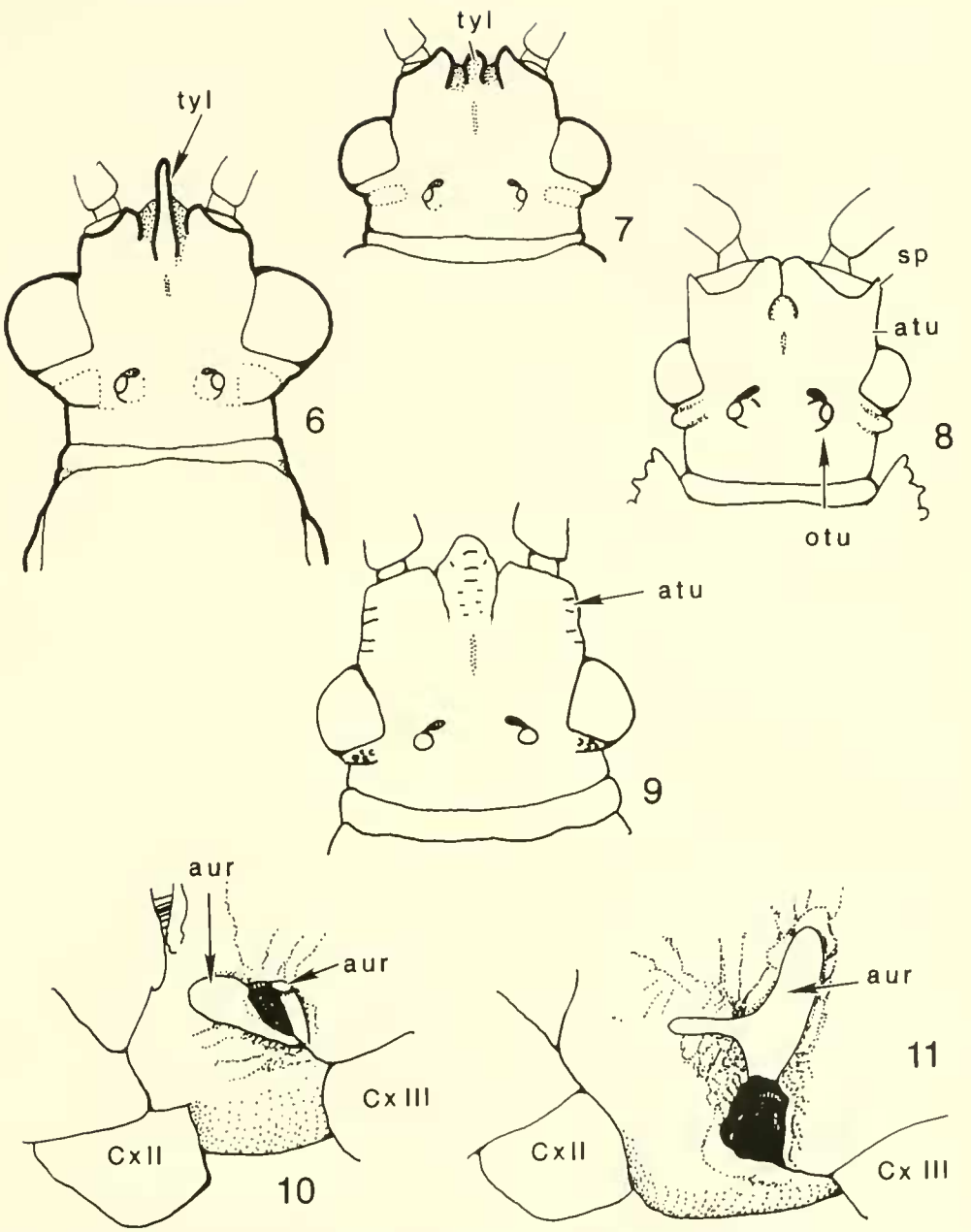
dini," "Leptoscelidini," and "Meropachydinae" have been spelled that way for many years and by many people. Nevertheless, the Greek words from which these family-group names are formed, -scelis and -pachys, do not take d in their combining roots. As a result, the correct spelling of these groups is "Anisoscelini," "Leptoscelini," and "Meropachyinae."

Key to the Subfamilies and Tribes of New World Coreidae

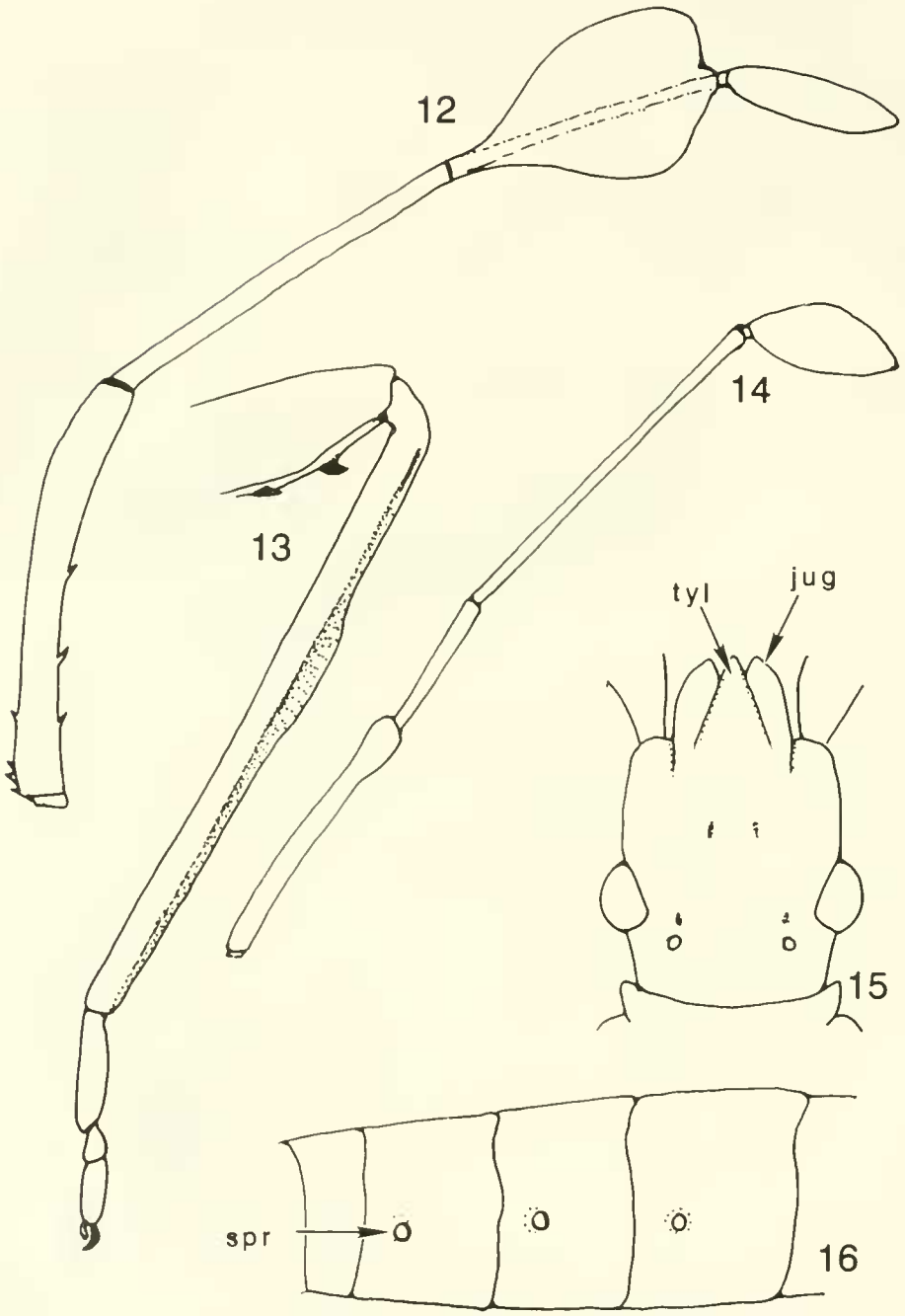
1. Tibiae not sulcate; metathoracic scent gland orifices with a single large or two nearly fused discs (auricles) (Fig. 1); meso- and metasterna sulcate; males with a bilobed genital capsule opening filled by the clearly visible parameres (Fig. 2); all species less than 12 mm long . . . . . Pseudophloeinae Stål, 1867
– Tibiae sulcate (sometimes shallowly) or, if appearing nonsulcate, without the above combination of characters; length variable . . 2
2. Hind tibiae with an apical tooth or spine (may be obscured by setae, Fig.3) . . . . . Meropachyinae Stål, 1867 . . . 3
– Hind tibiae unarmed at apex . . . . . Coreinae Leach, 1815 . . . 5
3. Scutellum elongate, extending beyond clavus; posterior acetabula projecting laterally, visible from above (Fig. 4); posterior tibiae broadly curved distally . Meropachyini Stål, 1867
– Scutellum triangular, about as long as broad, shorter than clavus; posterior acetabula not or only slightly projecting laterally, not visible from above (Fig. 5); posterior tibiae never curved 4
4. Posterior femora longer than abdomen, narrow and cylindrical basally, swollen apically; body small, robust, thick, somewhat compressed laterally; scutellum more or less elevated, terminating in a slightly elevated knob . . . . . Merocorini Stål, 1870
– Posterior femora shorter than abdomen, swollen for entire length; body larger, more elongate, not compressed laterally; scutellum more or less flat, if elevated basally, never terminating in a raised knob . . . . . Spathophorini Kormilev, 1954
5. Tylus projecting conspicuously beyond juga as a distinct knob or strongly compressed plate (Figs. 6, 7); juga strongly deflexed . . . . . Acanthocephalini Stål, 1870
– Tylus not or only vaguely projecting beyond juga; juga variable 6
6. With the combination of hind femora spinose or tuberculate, strongly incrassate in males; head not over half as long as pronotum and not extending past antenniferous tubercles or very slightly so; antenniferous tubercles occupying most of anterior head width, space between them rarely wider than one tubercle (Figs. 8, 9) 7
– Not with this combination of characters . . . 8
7. Metathoracic scent gland with a single fused auricle (sometimes bilobed, Fig. 11); ocellar tubercles large; usually with a spine present on antenniferous tubercles (Fig. 8); parameres membranous . . Acanthocerini Bergroth, 1913
– Metathoracic scent gland with two completely separated auricles (area between them depressed, Fig. 10); ocellar tubercles small; antenniferous tubercles never armed (Fig. 9); parameres sclerotized . . . . . Nematopodini Amyot & Serville, 1843
8. Hind tibiae expanded, expansion slight in some taxa (Fig. 13) . . . . . Anisoscelini Amyot & Serville, 1843
– Hind tibiae never expanded . 9
9. Juga extended and exceeding or equal to tylus in length (Fig. 15) 10
– Juga deflexed or at least not exceeding nor equal to tylus in length 11
10. Head shorter than pronotum, antennae terete; brachypterous. . . . . Barreratalpini Brailovsky, 1988a
– Head equal in length to pronotum; antennae triangular in cross section; macropterous . . . . . Chelinideini Blatchley, 1926
11. All femora spinose below, profemoral spines sometimes minute; bucculae never reaching midlength of head; head porrect; juga and tylus extended forward; rostrum reaching or extending onto abdomen, first segment reaching or extending past base of head . . . . . Leptoscelini Stål, 1867
– Not with this combination of characters. . . 12
12. Distance between hind coxae equal to distance from coxa to lateral margin; antenniferous tubercles prominent, subcontiguous above deflexed tylus and juga . . . . . Spartocerini Amyot & Serville, 1843
– Distance between hind coxae much narrower than distance from coxa to lateral margin, if distances nearly equal then head elevated between antenniferous tubercles; tylus and juga variable 13
13. Third antennal segment expanded, other segments terete (Fig. 12); tylus and juga deflexed, not filling space between antenniferous tubercles; all femora armed distally . . . . . Chariesterini Stål, 1867
– Third antennal segment never expanded, if appearing expanded, then other segments also



Figs. 1–5. 1. Metathoracic scent gland opening, *Coriomeris occidentalis* Dolling & Yonke (Pseudophloeinae). 2. Genital capsule, *C. occidentalis*. 3. Hind femur and tibia, *Merocoris distinctus* Dallas (Meropachyinae). 4. Dorsal view, *Hirulcus alternatus* (Dallas) (Meropachyini). 5. Dorsal view, *Diariptus* sp. (Spathophorini). act = acetabulum, clv = clavus, cx = coxa, par = paramere, sct = scutellum.



Figs. 6–11. Heads of coreids: 6. *Lucullia flavovittata* Stål (Acanthocephalini). 7. *Nyttum punctatum* (Dallas) (Acanthocephalini). 8. *Crinocerus sanctus* (Fabricius) (Acanthocerini). 9. *Mozena* sp. (Nematopodini). Metathoracic scent gland openings: 10. *Mozena* sp. (Nematopodini). 11. *Sagotylus confluens* (Say) (Acanthocerini). atu = antenniferous tubercle, aur = auricle, cx = coxa, otu = ocellar tubercle, sp = spine.



Figs. 12–16. 12. Antenna, *Chariesterus antennator* (F.) (Chariesterini). 13. Hind tibia, *Tarpeius brevicornis* Stål (Anisoscelini). 14. Antenna, *Madura perfida* Stål (Hydarini). 15. Head, *Chelinidea vittiger* Uhler (Cheliniideini). 16. Abdomen (Discogastrini). jug= jugum, spr = spiracle, tyl = tylus.

appearing expanded; tylus and juga usually extended anteriorly between antenniferous tubercles; femora rarely armed . . . 14

14. Spiracles situated twice as far from posterior border of middle abdominal segments (III–VI) as from anterior border (Fig. 16) . . . . . Discogastrini Stål, 1867

– Spiracles equidistant from anterior and posterior borders of middle abdominal segments (III–VI) 15

15. Fourth antennal segment flattened; third antennal segment over twice as long as second (Fig. 14) . . . . . Hydarini Stål, 1873[1]

– Fourth antennal segment not flattened; third antennal segment usually shorter than second, never twice as long as second . . . . . Coreini Leach, 1815

List of Keys to New World Genera and Species of Coreidae

Key to North American species (Torre-Bueno 1941)

Pseudophloeinae (3 genera)

Key to genera (Dolling 1977)

Key to species of *Ceraleptus* Costa (Froeschner 1963)

Key to species of *Vilga* Stål (Dolling 1977)

Key to North American species of *Coriomeris* Westwood (Dolling and Yonke 1976)

Meropachyinae (15 genera)

Key to tribes and genera of Meropachyinae (Kormilev 1954) (With the exception of *Accocopus* Stål, 1864, *Allopeza* Bergroth, 1912, *Diariptus* Stål, 1859, *Eretmophora* Stein, 1860, and *Hoplophthonia* Schmidt, 1911.)

Coreinae

Acanthocephalini (15 genera)

Key to species of *Acanthocephala* Laporte of North and Central America (Gibson and Holdridge 1918a)

Key to species of *Nyttum* Spinola (Dolling and Casini 1988)

Key to species of *Petalops* Amyot & Serville (Brailovsky 1991)

Key to species of *Stenametapodus* Breddin (Brailovsky 1984a)

Acanthocerini (16 genera)

Key to genera of Acanthocerini (O'Shea 1980a) (also see Brailovsky 1988c)

Key to species of *Moronopelios* Brailovsky (Brailovsky 1988c)

Key to species of *Thlastocoris* Mayr (Brailovsky 1990a)

Anisoscelini (9 genera, or more, see Osuna 1984)

Key to genera of Anisoscelini (Osuna 1984)

Key to species of *Leptoglossus* Guérin-Meneville (Allen 1969)

Key to species of *Narnia* Stål (Gibson and Holdridge 1918b)

Barreratalpini (1 genus) (see Brailovsky 1988a)

Chariesterini (4 genera)

Key to genera of Chariesterini (Yonke 1972)

Key to species of *Chariesterus* Laporte (Ruckes 1955)

Key to species of *Ruckesius* Yonke (Yonke 1972)

Chelinideini (1 genus)

Key to species of *Chelinidea* Uhler (Herring 1980)

Coreini (30 genera)

Key to species of *Acidomeria* Stål (Brailovsky 1983a)

Key to species of *Althos* Kirkaldy (Brailovsky 1990d)

Key to species of *Anasa* Amyot & Serville (Brailovsky 1985)

Key to species of *Catorhintha* Stål (Brailovsky and Garcia 1987)

Key to Mexican species of *Cebrenis* Stål (Brailovsky 1984b)

Key to species of *Collatia* Stål (Brailovsky 1990b)

[1] Brailovsky (1988b) placed three New World genera in this mostly Old World tribe. Ahmad (1970) raised Hydarini to subfamily status, but this interpretation has not been universally accepted.

Key to species of *Daphnasa* Brailovsky (Brailovsky 1984c)
Key to species of *Himella* Dallas (Brailovsky and Barrera 1986a)
Key to species of *Hypselonotus* Hahn (Whitehead 1974)
Key to species of *Nirovecus* Stål (Brailovsky 1984d, 1990b)
Key to species of *Paryphes* Burmeister (Brailovsky 1986a)
Key to species of *Scolopocerus* Uhler (Brailovsky 1989a)
Key to species of *Sethenira* Spinola (Brailovsky 1988d)
Key to species of *Sphictyrtus* Stål (Brailovsky and Meléndez 1989)
Key to species of *Stenoprasia* Horvath (Brailovsky 1986b)
Key to species of *Sundarus* Amyot & Serville (Brailovsky 1988e)
Key to species of *Vazqueticoris* Brailovsky (Brailovsky 1990d)

Discogastrini (7 genera)
Key to genera of Discogastrini (Brailovsky 1984e)
Key to species of *Cnemomis* Stål (Brailovsky and Barrera 1986b)
Key to Mexican species of *Savius* Stål (Brailovsky 1986c)
Key to species of *Scamurius* Stål (Brailovsky 1986d)

Hydarini (3 genera)
Key to genera and species of Hydarini (Brailovsky 1988b)

Leptoscelini (4–9 genera)
Key to species of *Dalmatomammurius* Brailovsky (Brailovsky 1990c) (tentative tribal placement)
Key to species of *Plunentis* Stål (Brailovsky 1989b) (tentative tribal placement)

Nematopodini (15 genera)
Key to genera of Nematopodini (O'Shea 1980b)
Key to species of *Cnemyrtus* Stål (Brailovsky 1989b)
Key to species of *Curtius* Stål (Brailovsky 1986e)
Key to species of *Mozena* Amyot & Serville (Hossain 1970)
Key to Mexican species of *Nematopus* Berthold (Brailovsky and Zurbia 1983)
Key to Mexican species of *Piezogaster* Amyot & Serville (Brailovsky and Barrera 1984)
Key to species of *Quintius* Stål (Brailovsky & Berrera 1986c)
Key to species of *Zoreva* Amyot & Serville (Brailovsky & Barrera 1982)

Spartocerini (4 genera)
Key to species of *Sephina* Amyot & Serville (Brailovsky 1983b)
incertae sedis (3 genera)
Molchina Amyot & Serville 1843
Mammurius Stål 1862
Rochrosoma Reed 1901

Acknowledgments

I am grateful to Ms Mary Jane Spring for help with the illustrations, T. A. Suits, Department of Modern and Classical Languages, University of Connecticut, for advice on the spelling of Anisoscelini, Leptoscelini, and Meropachyinae, and Carl W. Schaefer for help in preparing this paper, and also a special thank you to the anonymous reviewer and Thomas J. Henry, both of whose comments helped tighten up the key.

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